

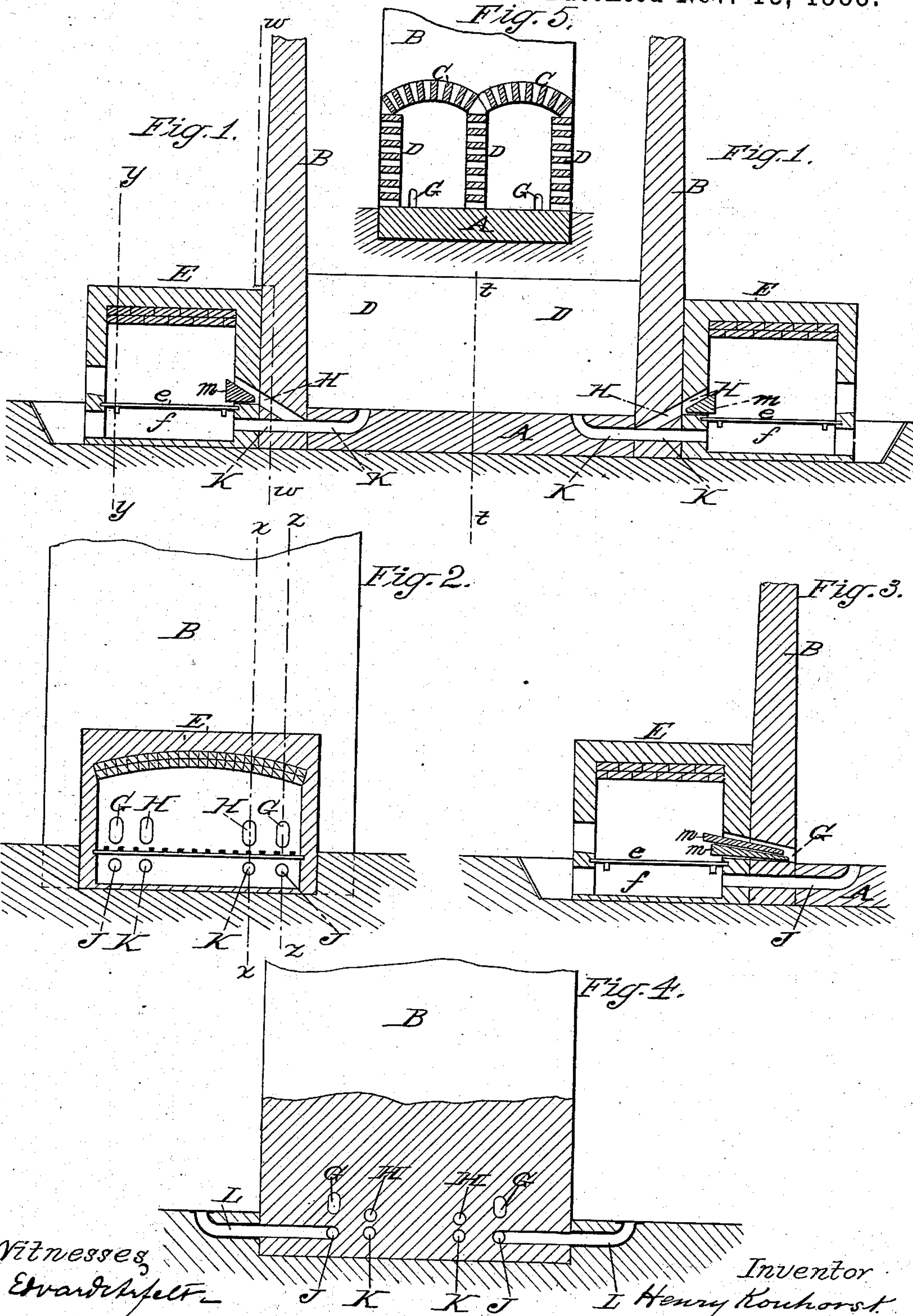
(No Model.)

H. KONHORST.

BRICK KILN.

No. 288,347.

Patented Nov. 13, 1883.



Witnesses
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UNITED STATES PATENT OFFICE.

HENRY KONHORST, OF HENDERSON, KENTUCKY.

BRICK-KILN.

SPECIFICATION forming part of Letters Patent No. 288,347, dated November 13, 1883.

Application filed January 23, 1883. (No model.)

To all whom it may concern:

Be it known that I, HENRY KONHORST, a citizen of the United States, and a resident of Henderson, in the county of Henderson and State of Kentucky, have invented certain new and useful Improvements in Brick-Kilns, of which the following is a specification.

My invention relates to that class of kilns in which furnaces are constructed against the outer sides of the kiln-walls.

The invention consists in certain novel details of construction, arrangement, and operation of flues and devices connected therewith, whereby several advantages are obtained, as will be hereinafter more particularly described.

The accompanying drawings illustrate the manner of carrying out my invention.

Figure 1 is a transverse vertical section of a kiln with furnaces adjoining, the section being taken on the line *xx* of Fig. 2. Fig. 2 is a section taken in the line *yy* of Fig. 1. Fig. 3 is a section taken in the line *zz* of Fig. 2. Fig. 4 is a section taken in the line *ww* of Fig. 1. Fig. 5 is a section, on a smaller scale, on the line *tt* of Fig. 1.

A represents the ground or floor of the kiln, and B B the side walls thereof. The ground or floor may be paved in any suitable manner, and walls B are fire-walls.

C represents an arch resting on the benches D. The number of benches and arches depends on the dimensions of the kiln. They are built up of green bricks to be burned. E E represent furnaces constructed against the outer sides of the walls B. The grates *e* of these furnaces are slightly lower than the level of the floor A. Each arch communicates with both furnaces by means of flues at the opposite ends of the arch. Each series of flues consists of a fire-flue, G, running horizontally from the furnace above the grate into the kiln above the floor A; a ground fire-flue, H, which commences above the grate and is inclined downward, and runs under the surface of the ground or floor to a point a short distance beyond the inner side of the wall, and terminates at the surface of the floor; a hot-air flue, J, running from the ash-pit *f* below the grate *e*, and communicating directly with the kiln; and another hot-air flue, K, running from the

ash-pit *f* and communicating with the ground-flue H. At suitable points in the wall are cold-air flues L, running from the outside of the furnaces and communicating with the fire-flues. Any or all of the flues may be provided with one or more, but preferably double, dampers, *m*, for regulating the draft. The benches and arches having been built up of green bricks, any desired number of green bricks may then be piled above them, with the usual interstices between them.

The advantages of my invention are: Wood, coal, or slack can be used as fuel. The kiln can be built wider than heretofore, as the heat is carried to near the center of the kiln through the ground-flues. The heat can be regulated at pleasure by the double dampers.

It is obvious that any number of benches and arches may be built up in the kiln, thereby allowing the kiln and furnaces to be constructed of any desired length.

I am aware of Patent No. 168,617, of 1875, in which a flue from the ash-pit and a flue from the fire-box of the furnace form a junction and connect with the kiln through its side, and also of Patent No. 182,895, of 1876, in which a pipe leads from a point outside the furnace to the bottom of the kiln; but these constructions are not sought to be covered in this application.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. In a brick-kiln having furnaces constructed against the outer sides of the kiln-walls, the flues H, leading from the fire-box to the ground-flue R, and the said ground-flue leading from the ash-box *f* to the kiln, and opening therein at a point remote from the side walls, substantially as herein described.

2. The combination, with a kiln and furnaces, of fire-flues G, running from the furnace above the grate through the walls of the kiln, and hot-air flues J, running from the ash-pit and entering the kiln through the floor thereof contiguous to the inlet of the flues G, substantially as herein described.

3. In a brick-kiln, and in combination with the furnace and body of the kiln, the ground-flues K, leading from the ash-pit through the floor of the kiln, the flues H, connecting the fire-box therewith, the flues J, connecting the

ash-pit with the kiln, and having flues L, connecting the same with the outer air, and the flues G, leading from the fire-box directly through the kiln-walls, as and for the purpose
5 set forth.

In testimony that I claim the foregoing as my invention I have signed my name, in pres-

ence of two witnesses, this 22d day of December, 1882.

HENRY KONHORST.

Witnesses:

R. C. BLACKWELL,
ED. MANION.